457270

PRODUCTS DIVISION

41020

PAGE 1

GROUP: Pet Marketing Group

DATE: July 27, 1979

CHARGE NO.: X-6-293 580

REQUESTOR: R.A. Merther

MARKETING or MANUFACTURING APPROVAL:

NAME:

APPROVED:

ADMINISTRATIVE RECORD

REQUEST FOR TECHNICAL SERVICE

PROBLEM TITLE: Analysis of Monokote for Asbestos - Floyd County Board of Education

SIGNIFICANCE: School District needs to determine if Fireproofing Material contains Asbestos

SPECIFIC OBJECTIVE: To determine the type of material (MK-3 or MK-4) removed from Rome Georgia school

SUGGESTED APPROACH:

DEADLINE (Last day information will be of value): ASAP

DETAILS OF PROBLEM:

ACCEPTED BY RESEARCH DEPT.: DATE: 7/27/79

ASSIGNED TO: M. Doyle

ADDITIONAL COPIES: Original to Library; H.C.Duecker, R.A.Merther, L.S.Sh[illegible], B.A.Blessington

CONFIDENTIAL

15080806

103Z00764

[redacted] ACTUAL COST: $150.00

41021 REPORTING DATE: August 15, 1979

SUMMARY:

The fireproofing material removed from Rome, Georgia school was examined by x-ray diffraction analysis, chemical dissolution and microscopic examinations.

Chrysotile fibers were found to be present in appreciable quantities (≥5%). Thus, it was concluded that the material was MK-3.

EXPERIMENTAL:

1. Material Examined As Received

By X-Ray Diffraction Method

Pulverize the material to -100 mesh size in a SPEX mill and x-ray.

Major: Gypsum, Vermiculite

Minor: Quartz and Chrysotile (Suspected)

Microscopic Observation

Long fiberous material (100x) was shown in the matrix.

2. Calcination

The received material was crushed to -20 mesh then heated in a platinum crucible with cover for 16 hours at 500°c to burn off the organic or cellulosic fibers.

The remaining residue was examined by polarized microscope at 430x and found long thin fibers of chrysotile.

3. Acid Dissolution

One gram of the received sample was digested with hot 1 liter of 0.01 N HCl for about 1 hour. The mixture was cooled off and filtered through a 0.45μ millipore filter. The solid residue was dried and examined by light microscope. Most of the gypsum which adhered to the fibers was dissolved but the chrysotile fiber remained in such as dilate acid solution.

Light miscropic examination (430x) showed the presence of long thin chrysotile asbestos fibers with the characteristic optical properties, (index of refraction ect.). The estimated quantity of the fiber in the sample was larger than 5%.

REFERENCE:

X-Ray File Misc. 293
Notebook 651-13

Julie C. Yang

JCY:mgd

15080807

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FLOYD COUNTY BOARD OF EDUCATION
1307 REDMOND CIRCLE
ROME, GEORGIA 30161
404/234-8228

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41622

July 23, 1979

Mr. Bob Merther
62 Whittemore Ave.
Cambridge, Mass. 02140

Dear Sir:

Please find enclosed a sample of material used in one of our schools.

We understand from the contractor that the material is "MONOKOTE".

The Georgia State Department said that the material contains asbestos and would have to be removed.

We would like for you to analyze this sample and let us know if it contains asbestos and if so what percent it contains.

We have been advised that the State requires a polarized light microscopic test. Alos, a dispersion staining test.

Also, if you have any information as to whether or not this will meet Environmental Protection Agency requirements for use in schools, we would be interested in having it.

Sincerely,

Bill Toles

Bill Toles
Director of Maintenance

BT/sjs

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ZONOLITE
CONSTRUCTION PRODUCTS DIVISION

41015

W. R. GRACE & CO. 62 WHITTEMORE AVENUE CAMBRIDGE, MASSACHUSETTS 02140 617-876-1400

This is to certify that no commercial asbestos is used in the manufacture of MONOKOTE® 5. Further, any trace contaminants of naturally occurring forms of asbestos in MONOKOTE, are bound in the in-place MONOKOTE so as to prevent asbestos fibers from entering the environment.

15080805

GRACE

103Z00763